

Abstract

A novel method of manufacturing a longitudinal granular oxide recording medium is disclosed. The method preferably entails obtaining a non-magnetic substrate, heating the substrate at a temperature T_1 that is greater than 150°C, forming a first layer with body-centered cubic atomic structure and with a $\langle 200 \rangle$ preferred growth orientation, cooling the substrate to a temperature T_2 and forming a second layer comprising a magnetic oxide-containing granular magnetic layer with a hexagonal close packed atomic structure and with a $\langle 11\cdot20 \rangle$ preferred growth orientation. The magnetic oxide-containing granular magnetic layer contains magnetic crystal grains that are substantially isolated by an inter-granular region comprising a non-magnetic substance, wherein the non-magnetic substance is preferably an oxide-containing material.